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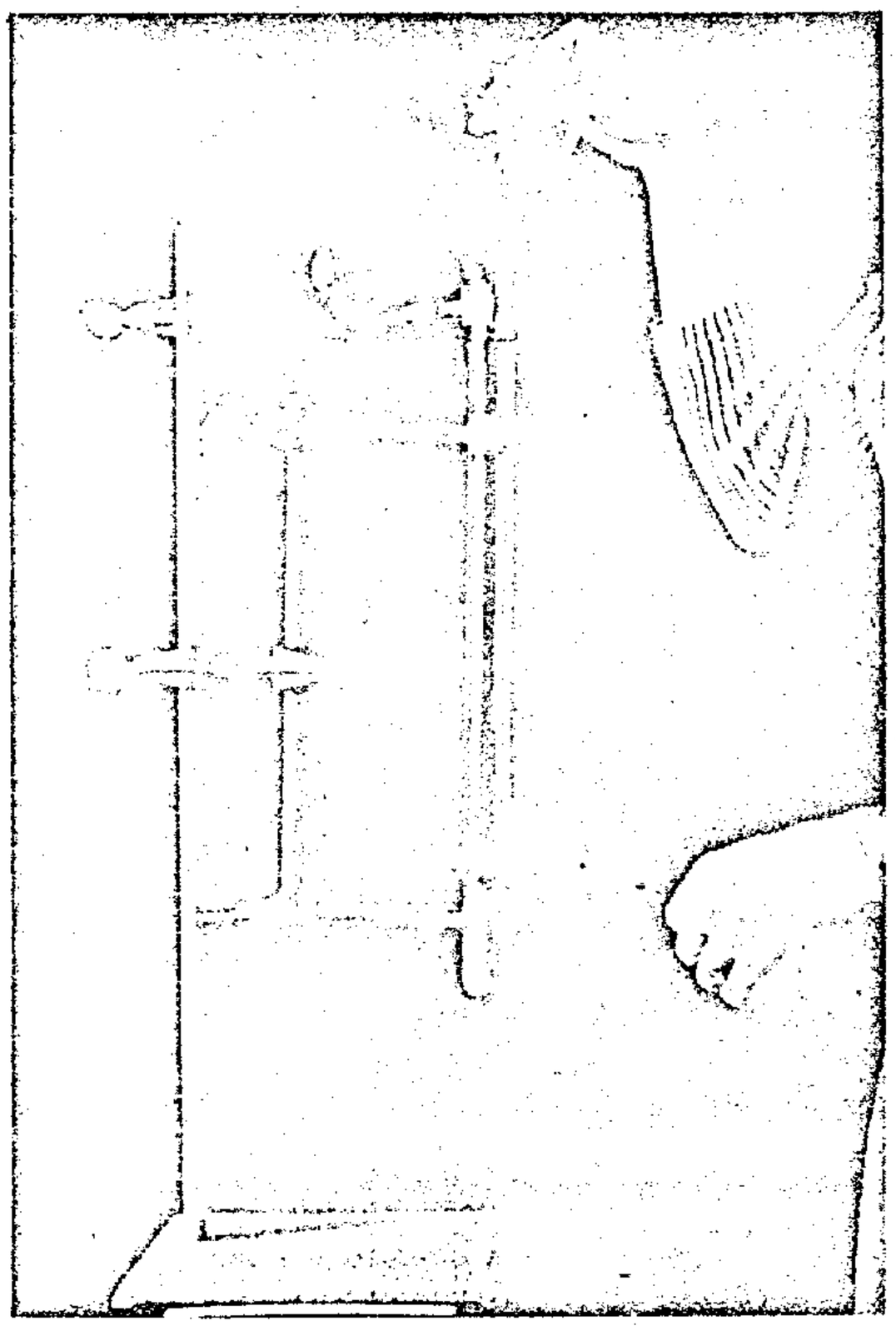
A Shrimp Measuring Cell --
A Device for Holding and Measuring Live Shrimp

A shrimp measuring cell is a device used to hold and restrain a live shrimp while length measurements are being made. The cell holds the shrimp straight for precise measurement; it prevents the animal from jumping and injuring itself; use of the device shortens the period of time shrimp are out of the water. These considerations are important, particularly if the same animal is to be handled repeatedly in an experiment.

The mechanism consists of a glass funnel, a test tube 38 cm long, a ring stand 61 cm high, three test tube clamps, a swivel clamp, a round metal rod 1 cm in diameter by 30 cm long, a 1-cm by 4-cm piece of thin stainless steel metal, and a sponge. One test tube clamp is attached near the top of the ring stand to hold the glass funnel in a vertical position. One end of the swivel clamp is attached approximately midway up the vertical bar of the stand, and the opposite end of the swivel clamp is attached to the center of the 30-cm rod. The rod is free to rotate 360 degrees. Test tube clamps are fastened to each end of the 30-cm rod and these in turn hold the ends of the test tube. The test tube is positioned so that when the tube is in a vertical position, the open end fits directly beneath the funnel. The thin stainless steel strip is clamped to the side of the funnel and acts as a stop to position the test tube in line with the funnel. The sponge is pushed to the bottom of the tube.

A shrimp placed tail first into the funnel slides into the test tube and comes to rest against the sponge which cushions the fall (see figure). The tube is then rotated 90 degrees so that the shrimp lays in a horizontal position. By tapping the closed end of the tube gently, the shrimp can be moved slightly away from the sponge so that both the telson and the rostrum are visible. The tube is then rolled laterally (when necessary) so the dorsal surface of the shrimp faces the person measuring. A ruler is then placed against the surface of the glass tube and the shrimp is measured. From the measurer's position distortion by the glass is minimal. After the measurement is recorded, the tube is rotated again so the shrimp slides downward (head first) out of the tube and into the hand. By sliding the shrimp head first from the tube, the eyes can be immediately covered in the measurer's hand, and the shrimp continues to be restrained and is less likely to jump.



Placing shrimp into the measuring cell.

Shrimp ranging in size from 6 to 20 cm in length may be measured in one of three cells having inside tube diameters of 1.5, 2, or 2.5 cm.

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